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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/518,669

07/21/2005

Ulrike Wachendorff-Neumann

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05/30/2008

STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.
1100 NEW YORK AVENUE, N.W.
WASHINGTON, DC 20005

EXAMINER

QAZI, SABIHA NAIM

ART UNIT

PAPER NUMBER

1612

MAIL DATE

DELIVERY MODE

05/30/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/518,669

Applicant(s)

WACHENDORFF-NEUMANN ET AL.

Examiner

Sabiha Qazi

Art Unit

1612

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 4/3/2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 9-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 9-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|-------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date: _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date: _____ | 6) <input type="checkbox"/> Other: _____ |

Non-Final Office Action

Claims 9-15 are pending. No claim is allowed at this time.

Summary of this Office Action dated April 14, 2008

1. Continued Examination Under 37 CFR 1.114
2. 35 USC § 103(a) Rejection
3. Data in Specification
4. Response to Remarks
5. Communication

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 4/3/2008 has been entered.

Rejection Under 35 U.S.C. 103(a)

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.

2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 9-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over, ISENRING et al. (United States Patent No. 6407, 100), HEINEMANN et al. (US Patent 6,103,717), STENZEL KLAUS et al. (CA 2367361, IDS reference) and JAUTELAT et al. (US Patent 5,789,430 and Applicants own disclosure (page 3 of the specification). All these references teach the compounds as antimicrobial agents, which embraces Applicant's claimed invention.

ISENRING teaches trifloxystrobin as fungicide. See the entire document especially lines 10-20 in column 1, lines 34-67 in column 6, abstract, and examples.

HEINEMANN teaches fuoxastrobin as antimicrobial agent. See the entire document especially examples 1-3 in column 15 and 16. These compounds have powerful microbial activity and are useful for controlling undesired microorganism. See lines 39-67 in column 10, lines 1-60 in column 11.

KLAUS teaches (-)enantiomer of 2-[2-(1-chloro-cyclopropyl)-3-(2-chlorophenyl)-2-hydroxypropyl]-2,4-dihydro-[1,2,4]-triazole-3-thione, (prothioconazole) which has better activity than the racemic mixture. See the entire document especially abstract; Table A on page 21 and Table B on page 23. Laevorotatory enantiomer has been disclosed to possess better activity.

JAUTELAT teaches prothioconazole as microbicides. See the entire document especially example 1 in column 35, lines 27-64 in column 29, lines 1-55 in column 30.

Present specification discloses that all the compounds are known.

Instant claims differ from the reference in claiming the synergistic combination of all three known compounds useful as antimicrobial and antifungal agents.

It would have been obvious to one skilled in the art at the time the invention was made to combine known compounds for the same purpose in expectation to get a better activity. Since all the above cited reference teach the active compounds It is *prima facie* obvious to combine two or more compositions each of which is taught by the prior art to be useful for the same purpose in order to form a new composition that is to be used for the very same purpose; the idea of

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combining them flows logically from their having been individually taught in the prior art. *In re Kerkhoven*, 205 USPQ 1069. . If two or more herbicides functioned by somewhat different biological mechanisms, their combined use could clearly be expected to be more efficient than the use of merely a larger amount of any one of the individual herbicides since multiple biological pathways would be affected at the same time. It is also known that, in any population of plants as with any organisms, some will be more resistant to a particular biocide than others.

As has been decided by the court, a combination, for the same purpose, of one additive explicitly disclosed in the prior art and another suggested by the prior art is at least prima facie obvious. *In re Susi*, 169 USPQ 423. There is nothing inventive in a composition of old ingredients of known properties with each ingredient functioning individually as expected. *In re Sussaman* 58 USPQ 262.

No synergism has been noted.

Furthermore, because of each compound appears to be well known in the prior art, it would appear that the combination of the compounds would have been obvious in view of MPEP 2144.06 and see Ex parte Quadranti, 25 USPQ2d 1071 (Bd. Pat. App. & Inter. 1992).

See Ex parte Quadranti where it was held that “There is no single, appropriate test for determining whether synergism has been demonstrated for chemical combination; rather, facts shown in each case must be analyzed to determine whether chosen method has clearly and convincingly demonstrated existence of synergism or unobvious result”. “Assuming arguendo that the differences in values presented are statistically significant, there is no evidence that they represent a true, practical advantage. *In re Freeman*, 474 F.2d 1318, 177 USPQ 139 (CCPA 1973); *In re Klosak* , 455 F.2d 1077, 173 USPQ 14 (CCPA 1972); *In re D'Ancicco*, 439 F.2d

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1244, 169 USPQ 303 (CCPA 1971). Also, prescinding from the Colby formula test, which as we have already indicated is at best controversial and in our view probably invalid, there is no evidence that the differences are unexpected. In re Merck, 800 F.2d 1091, 231 USPQ 375 (Fed.Cir. 1986); In re Longi , 759 F.2d 887, 225 USPQ 645 (Fed.Cir. 1985); In re Freeman, *supra*” .

NONOBVIOUSNESS OF A GENUS OR CLAIMED RANGE MAY BE SUPPORTED BY DATA SHOWING UNEXPECTED RESULTS OF A SPECIES OR NARROWER RANGE UNDER CERTAIN CIRCUMSTANCES

The nonobviousness of a broader claimed range can be supported by evidence based on unexpected results from testing a narrower range if one of ordinary skill in the art would be able to determine a trend in the exemplified data which would allow the artisan to reasonably extend the probative value thereof. *In re Kollman*, 595 F.2d 48, 201 USPQ 193 (CCPA 1979) (Claims directed to mixtures of an herbicide known as "FENAC" with a diphenyl ether herbicide in certain relative proportions were rejected as *prima facie* obvious. Applicant presented evidence alleging unexpected results testing three species of diphenyl ether herbicides over limited relative proportion ranges. The court held that the limited number of species exemplified did not provide an adequate basis for concluding that similar results would be obtained for the other diphenyl ether herbicides within the scope of the generic claims. Claims 6-8 recited a FENAC:diphenyl ether ratio of 1:1 to 4:1 for the three specific ethers tested. For two of the claimed ethers, unexpected results were demonstrated over a ratio of 16:1 to 2:1, and the effectiveness increased as the ratio approached the untested region of the claimed range. The court held these tests were commensurate in scope with the claims and supported the nonobviousness thereof. However, for

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a third ether, data was only provided over the range of 1:1 to 2:1 where the effectiveness decreased to the "expected level" as it approached the untested region. This evidence was not sufficient to overcome the obviousness rejection.); *In re Lindner*, 457 F.2d 506, 509, 173 USPQ 356, 359 (CCPA 1972) (Evidence of nonobviousness consisted of comparing a single composition within the broad scope of the claims with the prior art. The court did not find the evidence sufficient to rebut the *prima facie* case of obviousness because there was "no adequate basis for reasonably concluding that the great number and variety of compositions included in the claims would behave in the same manner as the tested composition.").

II. < DEMONSTRATING CRITICALITY OF A CLAIMED RANGE

To establish unexpected results over a claimed range, applicants should compare a sufficient number of tests both inside and outside the claimed range to show the criticality of the claimed range. *In re Hill*, 284 F.2d 955, 128 USPQ 197 (CCPA 1960).

In absence of any criticality and/or unexpected results presently claimed subject matter, which is the combination of known compounds, would have been obvious at the time of invention to one skilled in the art.

In the light of the forgoing discussion, the Examiner's ultimate legal conclusion is that the subject matter defined by the instant claims would have been obvious within the meaning of 35 U.S.C. 103(a).

Data in Specification

Data presented in specification presented on page 11 has been considered. Even if the result is synergistic for a given concentration it does not commensurate with the scope of claimed ranges. Applicant's argument about calculations was found persuasive. However, the efficacy of fluoxastrobin (III) was found to be 67% and for the mixture of all three compound (1:2:1) is 78% which appear to be not much different to be synergistic. The data as presented does not support the claimed subject matter.

Declaration and Response to Remarks

Applicants arguments were fully considered but are not found persuasive therefore rejection is maintained. As has been decided by the court, a combination, for the same purpose, of one additive explicitly disclosed in the prior art and another suggested by the prior art is at least prima facie obvious. In re Susi, 169 USPQ 423. There is nothing inventive in a composition of old ingredients of known properties with each ingredient functioning individually as expected. In re Sussaman 58 USPQ 262.

Declaration filed Dr. Peter Dahmen on 10/29/2007 has been considered by the examiner. The specification discloses that the components present in the active compound combination according to the invention in addition to the active compound of the formula (I) are likewise known.

Specifically, the active compounds are described in the following publications: (see page 3)

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Compound of the formula (I): EP-A-460 575

Compound of the formula (II): WO 96/16048

Compound of the formula (III): EP-A-040 345

The following active compound combinations are likewise known:

Active compound combination comprising compounds of the formulae (I) and (II):

WO 97/00012.

Active compound combination comprising compounds of the formulae (II) and (III): 20 WO 98/47367. If the active compounds in the active compound combination according to the invention are present in certain weight ratios, the synergistic effect is particularly pronounced. However, the weight ratios of the active compounds in the active compound combination can be varied within a relatively wide range. In general, 0.1-10 parts by weight, preferably 0.2-5 parts by weight, of active compound of the formula (II) and 0.1-10 parts by weight, preferably 0.2-5 parts by weight, of active compound of the formula (III).

The data as presented on page 11 clearly shows that **all the ratios** of the combination of the compounds of formula (I), (II) and (III) cannot be predicted as synergistic. Claims are not limited to such ratios. The data presented on page 11 is as follows:

.Table A

Pyrenophora teres test (barley)/curative

Application rate Efficacy in %

of active compound in g/ha

Known:

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Ex. (I) 67

'Ex. (II)56

Ex. (111)22

Mixture according to the invention:

Ex. (I) + Ex. (II) + Ex. (III)

35 + 30 + 35

78

(10:8.5:10)

As is shown efficacy of compound (I) is 67 wherein the mixture shows 78. Note, that the ratio is very specific. If two or more herbicides functioned by somewhat different biological mechanisms, their combined use could clearly be expected to be more efficient than the use of merely a larger amount of any one of the individual herbicides since multiple biological pathways would be affected at the same time. It is also known that, in any population of plants as with any organisms, some will be more resistant to a particular biocide than others. Further the range is specific and does not commensurate with the scope of claims.

The combination of the three compounds for the same purpose would have been obvious to one skilled in the art at the time invention was filed. Furthermore, because of each compound appears to be well known in the prior art, it would appear that the combination of the compounds would have been obvious in view of MPEP 2144.06 and also see Ex parte Quadranti, 25 USPQ2d 1071 (Bd. Pat. App. & Inter. 1992).

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Communication

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sabiha Qazi whose telephone number is (571) 272-0622. The examiner can normally be reached on any business day except Wednesday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Krass Frederick can be reached on (571) 272-0580. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Sabiha Qazi/

Primary Examiner, Art Unit 1612

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